Dispatchable Energy Resource Balancing Service (DERBS) Version 2

Effective: 09/13/13

This business practice describes the Dispatchable Energy Resource[1] Balancing Service (DERBS) and clarifies its application.

Version 2 of this Business Practice implements changes to the dead band and the billing factor as they were decided upon in the 2014-2015 Generation Inputs Rate Case.

Specific changes to this version include:

- Steps B.1 and Section C, Example 1, steps 1-2 and Example 2, steps 1-2: Replaced "one-minute" with "five-minute"
- Section C:
  - Example 1 and 2, steps 1-2: Replaced "2MW" with "3MW"
  - Example 1, Steps 1-2: Replaced "6MW" with "5MW"
  - Example 2, step 1: Replaced "538" with "537"
  - Example 2, step 2: Replaced "542" with "543"

[1] Any non-federal thermally-based generating resource 3 MW or greater that schedules its output or is included in BPA's Automatic Generation Control system. This includes generation behind the meter where a generation estimate is used as the resource schedule.

A. DERBS Description

1. DERBS is a Control Area Service that provides the generation capability to follow within-hour variations caused by Dispatchable Energy Resources in the Bonneville Power Administration (BPA) Balancing Authority Area. This service helps to maintain the power system frequency at 60 Hertz in conformance with North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC) reliability standards and provides the regulation, following, and imbalance reserve needed to support unexpected variations in output of Dispatchable Energy Resources.
2. Dispatchable Energy Resources in the BPA Balancing Authority Area are required to either purchase this service from BPA or make alternative comparable arrangements to satisfy their within-hour balancing service obligation. BPA will determine if a Customer[1]'s proposed alternative arrangement satisfies its within-hour balancing service obligation.

B. DERBS Application

1. BPA will determine the DERBS billing factor using the five-minute Station Control Error[2] (SCE) for each resource. The SCE is the difference between the five-minute integrated metered output of the resource and the net resource schedule. The hourly billing factor is based on the positive or negative Station Control Error in excess of the dead band. The resource schedule will be adjusted for standard ramps including intra-hour schedules and dispatch orders. For generation behind the meter the resource schedule is the generation estimate. Additional details can be found in the current rate schedule.
2. Schedules are adjusted for ramps by applying the WECC guidelines for hourly and intra-hour e-Tag default ramp rate of a linear ramp of 20 minutes across the top of the hour and 10 minutes for start, stop and transition times other than the top of the hour for intra-hour schedules.
3. The adjusted net plant resource schedule, also known as Base Point, is provided to resources, which have the GenICCP link. If the resource does not have a GenICCP link installed, they can use their submitted schedule (obtained from their marketing entity) or generation estimate adjusted for ramps
4. The metered output source will be BPA's
5. The DERBS rate will not apply to any schedule period in which a resource has called on contingency reserve If the resource has had a qualifying contingency before xx:30 of an hour and calls on contingency reserve, it will not be charged DERBS for any part of that

[1]Any customer taking service under Use of Facilities (UFT), Formula Power Transmission (FPT), Integration of Resources (IR), Part II or Part III of the OATT.
[2]The difference between the amount of generation scheduled from a generator and the actual output of that generator.

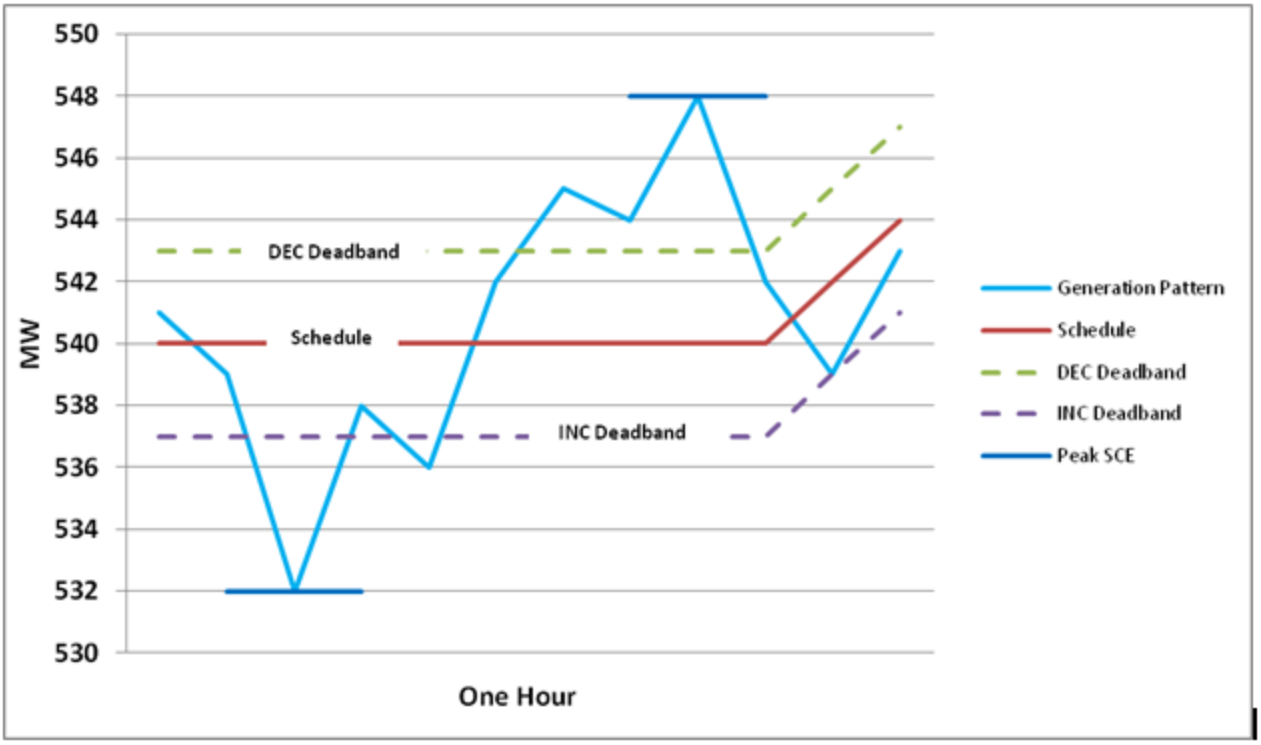
hour. If the resource has had a qualifying contingency on or after xx:30 and calls on contingency reserve, it will not be charged DERBS for any part of that hour or of the next hour.

6. The DERBS rate will not apply to any hour in which BPA has given a Dispatch Order[1] to the resource to operate at a different level than the schedule or generation estimate. The Dispatch Order may be in the form of an e-Tag Curtailment, a phone call from a BPA dispatcher, or other form of communication.
7. The DERBS rate will not apply to any hour in which a host utility within BPA's Balancing Authority Area has given a Dispatch Order to the resource to operate at a different level than the schedule or generation estimate. The Customer must provide documentation of the Dispatch Order to BPA for review and approval for the DERBS rate to not apply.

[1]Order or directive from Transmission Services to dispatch, curtail, redispatch, limit output, or shed load. Dispatch Orders may be communicated by various methods including, but not limited to: phone call (e.g. to redispatch generation up or down); electronic signal (e.g. via direct telemetry or private web application to limit generation according to DSO216); or NERC e-Tagging system (e.g. to curtail transmission schedules and the generation using those schedules).

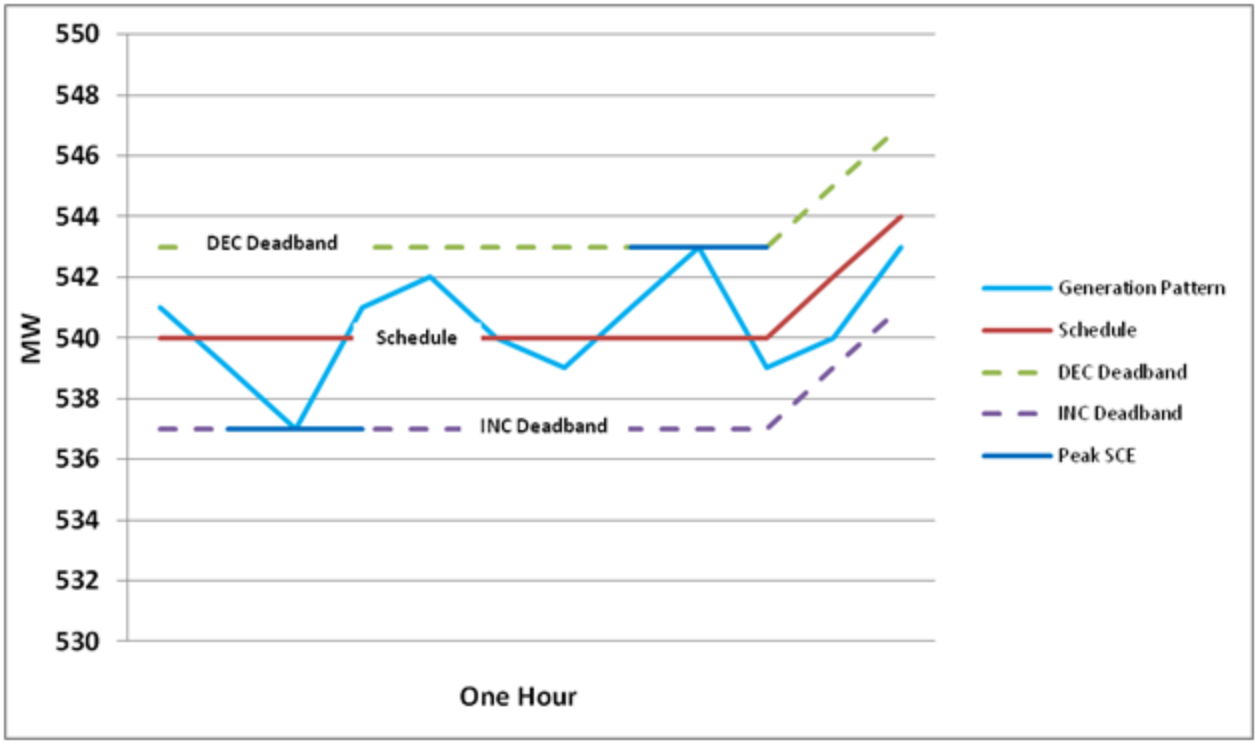
C. Examples of DERBS Application

Example 1 – General Application



1. INC DERBS Billing Factor = Peak Five-Minute Station Control Error(SCE) (532) less schedule (540) equals absolute value of 8MW less 3MW dead band is 5MW Billing Factor
2. DEC DERBS Billing Factor = Peak Five-Minute Station Control Error(SCE) (548) less schedule (540) equals absolute value of 8MW less 3MW dead band is 5MW Billing Factor

Example 2 – Dead Band Performance



1. INC DERBS Billing Factor = Peak Five-Minute Station Control Error(SCE) (537) less schedule (540) equals absolute value of 3MW less 3MW dead band is 0MW Billing Factor
2. DEC DERBS Billing Factor = Peak Five-Minute Station Control Error(SCE) (543) less schedule (540) equals absolute value of 3MW less 3MW dead band is 0MW Billing Factor

D. Additional Information

Policy Reference

- Transmission & Ancillary Services Rate Schedule

Related Business Practices and Documents

- Operating Reserves[1]
- Redispatch and Curtailment

Version History

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	• Section C:
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Version 1	10/01/11 New BP. Effective 10/01/11 This business practice describes the Dispatchable Energy Resource Balancing Service (DERBS) and clarifies its application.

[1] (Also called Contingency Reserves) The combination of Operating Reserve-Spinning Reserve Service and Operating Reserve-Supplemental Reserve Service. Fifty percent of Operating Reserves Services must be Spinning Reserves Services.